

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~An optically powered and optically data-transmitting~~ wireless intraocular pressure sensor device for detecting excessive intraocular pressure above a predetermined threshold pressure, comprising:

a pressure switch that is sized and configured to be placed in ~~the anterior chamber of an~~ eye, wherein said pressure switch is activated when the intraocular pressure is higher than the predetermined threshold pressure; and

an optical output configured to be placed in the eye and electrically connected to the pressure switch, wherein the state of the optical output indicates whether the pressure switch was activated.

2. (Original) The device of claim 1, wherein the pressure switch is a micro electromechanical system.

3. (Original) The device of claim 1, wherein the pressure switch is placed on the iris of an eye.

4. (Original) The device of claim 1, wherein the pressure switch is placed on an intraocular lens.

5. (Original) The device of claim 1, wherein the pressure switch is placed on a glaucoma tube.

6. (Original) The device of claim 1, wherein the pressure switch is powered by a solar cell system.

7. (Original) The device of claim 1, wherein the pressure switch is powered by a battery.

8. (Original) The device of claim 1, wherein the pressure switch comprises a first electrode and a second electrode mounted onto a compressible enclosure, the electrodes being sized, configured and positioned spaced apart when the intraocular pressure is lower than the predetermined threshold pressure, and wherein the first electrode contacts the second electrode

to make a closed electric circuit when the intraocular pressure becomes higher than the predetermined threshold pressure.

9. (Original) The device of claim 8, wherein a timer is provided to record the time, date, and duration when the closed electric circuit is formed for signaling excessive intraocular pressure above the predetermined threshold pressure.

10. (Original) The device of claim 9 further comprising an optical readout from the timer.

11. (Currently Amended) The device of claim [[10]] 1, further comprising a resettable pressure switch.

12. (Currently Amended) The device of claim [[11]] 1, further comprising an external instrument [[having means]] for optically activating the optical [[readout]] output.

13. (Currently Amended) The device of claim 12, wherein the external instrument comprises [[means]] a sensor for receiving light from the optical [[readout]] output.

14. (Original) The device of claim 13, wherein the external instrument comprises means for monitoring ambient atmospheric pressure.

15. (Currently Amended) The device of claim [[14]] 1, wherein the device is optically powered by an external instrument ~~optically powers the device of claim 11~~.

16. (Currently Amended) The device of claim 15, wherein the external instrument allows the intraocular pressure data as well as the time, date, and duration data to be at least one of downloaded to a computer, [[and/or]] downloaded to a PDA, and to be transmitted over the Internet to a central location such as a physician's office.

17. (Currently Amended) ~~An optically powered and optically data-transmitting~~ wireless intraocular pressure sensor device for detecting excessive intraocular pressure above a plurality of predetermined threshold pressures, comprising:

a plurality of pressure switches that are sized and configured to be placed in ~~the anterior chamber of~~ an eye, wherein a first pressure switch is activated when the intraocular pressure is higher than a first predetermined threshold pressure; and

an optical output configured to be placed in the eye and electrically connected to the plurality of pressure switches, wherein the state of the optical output indicates whether one or more of the pressure switches was activated.

18. (Original) The device of claim 17, wherein a second pressure switch is activated when the intraocular pressure is higher than a second predetermined threshold pressure.

19. (Original) The device of claim 17, wherein the pressure sensor device is a micro electromechanical system.

20. (Original) The device of claim 17, wherein the pressure sensor device is placed on the iris of an eye.

21. (Original) The device of claim 17, wherein the pressure sensor device is placed on an intraocular lens.

22. (Original) The device of claim 17, wherein the pressure sensor device is placed on a glaucoma tube.

23. (Original) The device of claim 17, wherein at least one of the plurality of pressure switches is powered by a solar cell system.

24. (Original) The device of claim 17, wherein at least one of the plurality of pressure switches is powered by a battery.

25. (Original) The device of claim 18, wherein the second predetermined threshold pressure is higher than the first predetermined threshold pressure.

26. (Original) The device of claim 17, wherein the first pressure switch comprises a pair of first electrodes mounted onto a first compressible enclosure, the pair of first electrodes being sized, configured and positioned spaced apart when the intraocular pressure is lower than the first

predetermined threshold pressure, and wherein the pair of first electrodes contacts each other to make a closed electric circuit when the intraocular pressure becomes higher than the first predetermined threshold pressure.

27. (Original) The device of claim 26, wherein a timer is provided to record the time, date, and duration when the closed electric circuit is formed for a signaling excessive intraocular pressure above the predetermined threshold pressure.

28. (Original) The device of claim 27 further comprising an optical readout system from the timer.

29. (Currently Amended) The device of claim ~~[[27]]~~ 17, further comprising resettable pressure switches.

30. (Currently Amended) The device of claim ~~[[29]]~~ 17, further comprising an external instrument ~~[[having means]]~~ for optically activating the optical ~~[[readout]]~~ output.

31. (Currently Amended) The device of claim 30, wherein the external instrument comprises ~~[[means]]~~ a sensor for receiving light from the optical ~~[[readout]]~~ output.

32. (Original) The device of claim 30, wherein the external instrument comprises means for monitoring ambient atmospheric pressure.

33. (Currently Amended) The device of claim ~~[[32]]~~ 17, wherein the device is optically powered by an external instrument ~~optically powers the device of claim 29~~.

34. (Currently Amended) The device of claim 33, wherein the external instrument allows the intraocular pressure data as well as the time, date, and duration data to be at least one of downloaded to a computer, ~~[[and/or]]~~ downloaded to a PDA, and to be transmitted over the Internet to a central location such as a physician's office.

35. (Currently Amended) A method of self-checking intraocular pressure of a patient comprising:

~~[[providing]]~~ implanting an ~~[[optically powered and]]~~ optically data-transmitting wireless

intraocular pressure sensor device for detecting excessive intraocular pressure above a predetermined threshold pressure into an eye of a patient;

[[, wherein said device comprises]] checking the pressure sensor device with an external instrument comprising [[means for]] a sensor for wirelessly receiving an optical [[readout]] signal from an optical output implanted in the eye and electrically connected to the pressure sensor device indicative of detected excessive intraocular pressure; and
~~—self check the detected excessive intraocular pressure by activating the external instrument by the patient.~~

36. (Original) The method of claim 35, wherein said sensor device comprises a pressure switch that is sized and configured to be placed in the anterior chamber of an eye of the patient, wherein said pressure switch is activated when the intraocular pressure is higher than the predetermined threshold pressure.

37. (New) The method of claim 35, wherein implanting comprises placing the pressure sensor device on one of an intraocular lens, a glaucoma tube, and an iris.

38. (New) The device of claim 13, wherein receiving light from the optical output comprises receiving light emitted from the optical output.

39. (New) The device of claim 31, wherein receiving light from the optical output comprises receiving light emitted from the optical output.

40. (New) The device of claim 17, wherein the optical output comprises at least one optical output for each of the plurality of pressure switches.